



Heriot-Watt University
Research Gateway

Rich picture

Citation for published version:

Berg, T 2015, 'Rich picture: the role of the facilitator', *Systemic Practice and Action Research*, vol. 28, no. 1, pp. 67-77 . <https://doi.org/10.1007/s11213-014-9318-z>

Digital Object Identifier (DOI):

[10.1007/s11213-014-9318-z](https://doi.org/10.1007/s11213-014-9318-z)

Link:

[Link to publication record in Heriot-Watt Research Portal](#)

Document Version:

Peer reviewed version

Published In:

Systemic Practice and Action Research

Publisher Rights Statement:

The final publication is available at Springer via <http://10.1007/s11213-014-9318-z>

General rights

Copyright for the publications made accessible via Heriot-Watt Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

Heriot-Watt University has made every reasonable effort to ensure that the content in Heriot-Watt Research Portal complies with UK legislation. If you believe that the public display of this file breaches copyright please contact open.access@hw.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Systemic Practice and Action Research

Rich Picture: The Role of the Facilitator

--Manuscript Draft--

| | |
|---|---|
| Manuscript Number: | SPAA-D-13-00048R2 |
| Full Title: | Rich Picture: The Role of the Facilitator |
| Article Type: | Original Research |
| Keywords: | rich picture; facilitation; workshop; best practice; practitioner |
| Corresponding Author: | Tessa Berg Heriot-Watt University Edinburgh, UNITED KINGDOM |
| Corresponding Author Secondary Information: | |
| Corresponding Author's Institution: | Heriot-Watt University |
| Corresponding Author's Secondary Institution: | |
| First Author: | Tessa Berg |
| First Author Secondary Information: | |
| Order of Authors: | Tessa Berg |
| Order of Authors Secondary Information: | |

Many thanks for your review. I have accepted all your changes and made all the appropriate deletions and acceptances.

Author

Rich Picture: The Role of the Facilitator

Dr Tessa Berg

HeriotWatt University

Department of Computer Science

Riccarton Campus

Edinburgh

tb79@hw.ac.uk

Abstract

Information Systems for complex situations often fail to adequately deliver quality and suitability. One reason for this failure is an inability to identify comprehensive user requirements. Seldom do all stakeholders, especially those ‘invisible’ or ‘back room’ system users, have a voice when systems are designed. To improve upon this, system designers use rich pictures as a diagrammatic means of identifying differing world views with the aim of creating shared understanding of the organisation. Rich pictures (RP) have predominantly been used as freeform, unstructured tools with no commonly agreed syntax.

This paper focuses only on the early stages of rich picture facilitation and is part of a large scale research project involving analysis on a substantial collection of rich pictures. Although facilitation is well documented in other domains there is a dearth of information and advice within academic literature on how to facilitate RP collaborative group drawing exercises. Thus, three styles of rich picture facilitation are presented showing how facilitator instruction and approach to delivery affects the initial picturing process and outcome. Results, suggest that the method one takes when instigating rich picture group work has profound influences on the group behaviour and the resulting rich pictures. From the researchers point of view it is hoped that this paper might act as a catalyst for debate concerning the role of the facilitator in collaborative diagramming.

Introduction

The rich picture (RP) is an unstructured way of capturing information flows, communication and, in essence, human activity. The RP uses untutored pictures and cartoon-like representations to aid thinking and to record ideas about a situation. The pictures are predominantly drawn by groups of stakeholders in a participative way but can also be drawn by individuals. The RP, using small images, allows a multitude of problem situations to emerge within a single picture drawn by multiple authors. Although a popular tool amongst system practitioners there are problems, for some, with its lack of instructions and guidelines for both construction and interpretation (Berg & Pooley, 2012c)

This study does not purport to be empirical and could perhaps be seen as mainly exploratory based on qualitative observational opinion. While acknowledging this limitation this study does however, emphasise the importance of this work and purport the relevance of any study, however small in data size, to add to the scarcity within literature in the field of RP facilitation. It is also accepted that not all RPs are facilitated. Many sketch out a RP for an individual purpose. Not all RPs require formal facilitation; for example two people sitting together and using the tool to aid their thinking process on a problem (Armson, 2011). It is suspected that numerous people have discovered the RP through reading books on Information Systems (IS) and more specifically Checklands SSM work (Checkland, 1981). For many however, the first time they discover, or at least attempt to draw the RP, is in a workshop or lecturing environment and for these people the introduction is given or led by a facilitator or lecturer.

Discussion

A group RP can be a tool to aid communication. The RP is often drawn to be experienced by people other than its creators. The process of those who use the RP tool can be a, 'Cycle of Communication' (Figure 1) between creators, facilitators and other stakeholders. The group RP process often begins (phase 1) with practitioner facilitation wherein the RP is introduced and instructions are given on what is required of the group. Phase two (group internal discussion) usually, but not always, precedes phase 3. Phase 3 on the cycle is RP construction, an act in which groups ideally both communicate and accommodate perceptions of the world through images and metaphor. This phase requires an ability to transcend and appreciate other, perhaps even juxtaposed, perceived realities than just one's own. Ideally, through communication of ideas and feelings and bringing the private to the public realm by diagramming together, the group produces an agreed upon RP. This is not always the case however, as group work is often dominated by certain individuals. It should be therefore noted that this paper offers a generalist perspective of the RP process and the cycle is not the only way to proceed. Thus said, the fourth and final phase of a stereotypical cycle is often to show ones drawing to others for response. The final phase seeks to communicate the RP meaning by verbal explanation to the facilitator and/or other groups or external participants. Following on from phase 4 the facilitator might ask for more RPs to be drawn to expand upon certain issues that come from the first RP and thus the process can begin again.

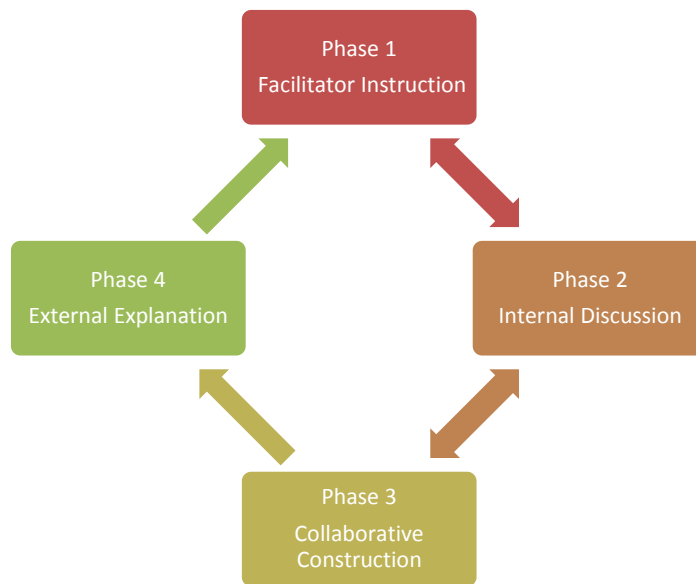


Figure 1 The RP Idealised Cycle of Communication Model

As figure 1 illustrates, the communicative cycle requires more than just the creators of the RP. There is an iterative process of facilitation within the cycle. The communicative potential of the created RP as an aesthetic artwork has been seen to arouse and engage emotion, challenge ideas and stimulate senses through a process of mutual discovery (Bell & Morse, 2012b). The first phase of the communication cycle is facilitation. This paper investigates the way the RP might be communicated prior to when the actual drawing begins. Particular focus is on finding out what instructions, if any, are given to groups and how these instructions affect the drawing process and RP outcome.

Literature on the RP (Bronte-Stewart, 1999) attests to there being no formal structure to the RP. It is of interest then to see how RPs are being facilitated, if at all, in terms of introduction, delivery style, instructions and expertise of the facilitators. This research suggests the way the RP is facilitated is a form of structure. What is being assumed here is that, *how the workshops are facilitated directly impacts upon the group behaviour, construction and style of picturing*. It is fully acknowledged that the wider domain of RP group work, in terms of group participation, is a vast subject area which has, to some extent, been documented (Bell & Morse, 2012a) (Bell & Morse, 2013). This paper however, is specifically looking at RP facilitation and the role of the facilitator in the initial phases.

It has become apparent, during extensive research on the RP, that there are a number of differing styles of RP facilitation being employed and they can be seen to differ considerably depending on audience, domain and experience of the facilitator. For example the RP is being taught as a core PSM (Problem Structuring Method) tool in many UK Universities and yet, upon investigation, there seems to be little ‘best practice’ advice, not only on ‘how to teach’ but also on, ‘how to facilitate a RP group’. The following highlights the RP facilitation advice that can be found in literature to date.

- The Open University TU811 and T552 courses offer explicit information on what is expected and what to include in the pictures (Open-University, 2009). Bell and Morse are prominent researchers into RPs and they give clear indication on how they manage their facilitation. Bell and Morse have done

considerable research into group dynamics and how to ensure good participation (Bell & Morse, 2010); (Bell & Morse, 2012b); (Bell & Morse, 2012a). They suggest the following as a way of facilitation:

- *The researcher wears plain black clothes so as not to stand out.*
 - *The researcher places chairs against the wall around the workshop room.*
 - *The researcher sits on these chairs observing the group*
 - *The researcher moves slowly from point to point around the groups sitting on different chairs too observe from different angles*
 - *The researcher does not speak to the group while they work*
 - *The research does not comment on the group work while the group is working*
 - *The researcher looks for the group action in terms of BECM: Being, Engaging, Contextualising and Managing. (Bell & Morse, 2012a)*
- The SSWM (sustainable sanitation and water management) website (Conradin, K; Kropac, M; Spuhler, D, 2010) offer some rules of RP engagement based upon Monk and Howards' work (Monk & Howard, 1998). They state *"a rich picture requires only a large drawing surface and writing utensils of different colours. A rich picture can be drawn in whatever way best suits the needs of the individual or group, and good drawing skills are not necessary. Anything that is seen as significant should be added to the rich picture, and care should be taken to identify all stakeholders who are involved in or may be affected by the system. Because it is important that the rich picture be clear to everyone involved, certain techniques are sometimes used to represent elements like stakeholder perspectives (such as thought bubbles) and relationships (such as crossed swords for stakeholder conflicts). These or other techniques may be used, as agreed upon by the group."*(Ibid). What is unique on this website is the SSWM toolkit tutorial that they openly share their instructions to help 'understand your system'. The toolkit offers advice on where to start and what to draw by giving illustrations of structural, process and concern elements. This website is specific for the domain of sustainable water management systems and therefore the icons and computerised development platform are not able to be generic across other domains.
 - Advice for drawing individual RPs is given by Armson (2011). Armson suggests that there are 4 basic rules to getting started:
 - Don't Structure the RP in any way.
 - Don't use too many words
 - Don't exclude observations about cultures, emotions and values
 - Include other points of view (Armson, 2011)

Armson does expound upon these rules but it should be noted she uses the RP as a tool for making sense of a messy situation from a small group (her sister and herself) perspective.

Facilitators of RP workshops note that one of the problems with getting participants to use the tool is trying to encourage people to draw in pictures (Berg & Pooley, 2012c). Drawing pictures is often a skill that is left behind in primary school and rarely encouraged, used or developed past the age of 12 (Gray, Brown, &

Macanufo, 2010). Such activity is often seen as not professional enough for undertaking a serious large project (Bronte-Stewart, 1999). During the 3 years of this research there have been opportunities to observe lecturers and experienced industry facilitators' practising RP group-work. It is important to note that one is NOT looking at how RPs are facilitated in terms of their follow on process i.e. the methods that facilitators use with the RP after drawing. Instead this paper is focussed on the very first introduction to RP's for groups and the way they are facilitated / taught or delivered prior to the actual drawing within groups. The reason for this distinction between different aspect of facilitation is that, in the researchers opinion, it seems it is possible to discover evidence of comparable difference within the 'prior-to' facilitation stage by observation and participation. However, the *ad hoc* nature of the different ways facilitators move on 'after' picturing is considerably multifaceted and seems to be very much down to facilitator experience, knowledge of domain, methodology adoption, demands of differing projects and culture or need of the organisation.

The role of facilitation in other sectors

It is worth taking time to consider the role of the facilitator in other domains in comparison to using the RP diagramming tool. Cameron (2005) finds, in general, facilitated groups are good at breaking deadlocks and collaborative idea generation and therefore show high levels of commitment to task. Tsai et al (2011) stress the need for 'effective facilitator communication' which is supported by Heron's (1999) findings on facilitator 'empowerment' whilst others note the importance of reflective dialogue (Senge, 1990); (Isaacs, 1999). Issues of effective and ineffective facilitation practices have been examined in literature. Sandker et al (2010), discussing conservation and development goals, note that problems emerge when models become too complex and they advise that a key lesson for participatory modelling is '*good facilitation in order to maintain a balance between models as stories*'. They further suggest that facilitation should not stop at the end of modelling and facilitators should '*remain involved over many years*'. Tsai et al (2011) look at the roles of internal and external facilitators and highlight the dearth of literature available, "*the significance of internal/external facilitators in driving ERP system performance needs more research*". Scholz et al produced an analytical framework of social learning using participatory methods and note the different roles people take in an action situation; participant, convener, facilitator, technical expert and leader. They suggest the role of the facilitator is to, "*help the group to work by applying his expertise*" but offer no further comment on how the facilitator is to proceed in this role. It does seem apparent, when researching the most recent facilitator research involving participatory methods, that there is an expectation of a facilitator having '*knowledge and expertise*' (Scholz, Dewulf, & Pahl-Wostl, 2013). This expertise is usually assessed at point of facilitator employment and is verified by references and longevity of facilitation work. Facilitation for participatory workshops has been somewhat addressed by Heron (1999) and later by Cameron (2005) with, more recently, Cao et al (2012) highlighting a set of interventions a facilitator might employ during action learning workshop to enhance learning motivation.

Method of discovery

Three, very different, deliveries of initial RP facilitation have been compared and contrasted looking at how style and approach effect audience participation. It should be noted that this research makes up a small part of a larger doctoral study on RP iconography interpretation and therefore takes a cursory look at RP facilitation. The

workshops were picked to show variance of instruction and style differentiation amongst RP facilitators. Much of what follows is observational and qualitative interpretation of the behaviour of witnessed facilitators. All facilitators have been anonymised. Relevance is placed on the materials used by facilitators; paper size, colours offered, type of pens. The model used for critical comparison of workshops to identify influencing factors is the ‘cycle of communication model as seen in figure 1.

Styles of facilitation

The following discusses the different styles and the, often contradictory, level of information given to participants of RP drawing sessions. The information presented and direct quotes are taken from 3 anonymised workshops/ lectures that were observed by the researcher. The researcher participated in many of the sessions. This participatory style of enquiry was undertaken as it was felt that one would gain a better and more engaged understanding of what is being asked of a RP participant rather than a formal external observation exercise. Another reason for this method of enquiry was that it allowed a heightened level of engagement with the participants. The following Tables present the 3 observed RP facilitation workshops.

| |
|---|
| Workshop1 |
| Type of RP session: workshop for a large anonymised project |
| Year: 2011 |
| Time taken : 10 minute discussion and 45minute picturing session |
| Attendees: 2 men 4 women in 1 group |
| Facilitator (s): 2 men both academics and expert industry professionals |
| Paper size : flipchart size |
| Colours offered : 5 coloured pens (1x black, 2x red,1xgreen and 1x orange) |
| Introduction platform: PowerPoint presentation |
| Style of delivery : engaging, fun, personable and friendly and expert |
| Discussion on previous pictures: showed a few pictures and discussed their strengths and weaknesses |
| Most notable quotes from facilitator when discussing the RP: <i>“this is a crap one in comparison”</i> and <i>“there are no rules”</i> |

Table 1 Observation from Workshop1 (W1)

| |
|---|
| Workshop2 |
| Type of RP session: workshop at conference |
| Year: 2012 |
| Time taken : 10 minute discussion and 35minute picturing session |
| Attendees: 4 men 2 women in 2 groups with 26 conference delegates observing |
| Facilitator (s): 1 man. 25 years in both academia and industry project facilitation |
| Paper size : flipchart size but facilitator suggested they prefer a white board when available |
| Colours offered : 3 coloured pens for each group (1x black, 1x red,1xgreen) |
| Introduction platform: PowerPoint presentation |
| Style of delivery : engaging, authoritative , personable and friendly and expert |
| Discussion on previous pictures: showed a few pictures and discussed their strengths. |
| Most notable quotes from facilitator : <i>“the picture itself is not important”</i> ; <i>“sometimes I find it is easier and less problematic if I draw the picture whilst the group discusses”</i> |

Table 2 Observation from Workshop 2 (W2)

| |
|--|
| Workshop 3 |
| Type of RP session: lecture on SSM and RPs |
| Year: 2010 |
| Time taken : 30 minute discussion on RP and reminder of previous lecture on SSM and 15minute picturing session |
| Attendees: 8 students, 2 groups of 4 (this was a solely observed workshop with no involvement) |
| Facilitator (s): 1 female. Lecturer in IS. No experience of facilitation in industry |
| Paper size : A3 |
| Colours offered : 10 coloured pens in pack given to each group |
| Introduction platform: PowerPoint presentation |
| Style of delivery : authoritative, teaching, engaging, friendly , non expert |
| Discussion on previous pictures: showed a few pictures as examples. No discussion on their strengths and weaknesses. High level teaching on link of RP to SSM |
| Most notable quotes from facilitator “ <i>there seems to be few rules</i> ” “ <i>it will be in your exam so we better have a go</i> ” |

Table 3 Observation from Workshop 3 (W3)

Discussion on workshop facilitation styles

The 3 workshops (W1, W2, and W3) as described in the previous three tables all displayed different ways of facilitating the RP. All of these workshops conformed to the linear phases within the ‘Cycle of Communication’ as seen in figure 1. All the workshops showed previously drawn RPs on PowerPoint slides. W1 was facilitated in a lively and fun manner with one male taking the lead role and the other observed as being a close friend. They were seen to bounce funny stories and incidents relating to other workshops and pictures thus the group were seen to visibly relax and smiles and laughter were observed. The atmosphere was quite laid back. In W1 the facilitators were keen to emphasise in their PowerPoint examples of both weak and strong RPs. They were observed showing examples of their “*worst ever picture*” and proceeded to discuss areas of colour, connectivity and unrelated icons. It was however, noted that although a picture they showed was, in their words, “*crap*” it was still useable, “*there is still plenty to learn*”. As a participant in this workshop I wrote the following statement down during the presentation, “*at this point I feel the need to please....ie, not draw a bad rich picture*”. W1 showed the groups a wide variety of RPs and they spent time pointing out rich elements and interesting icons. W1 was the only workshop that showed RPs from around different parts of the world pointing out interesting cultural distinctions. W2 was facilitated in a similar way to W1. A notable difference was the style of delivery. W2 was less jovial and fun than W1 as the facilitator was more authoritative. W2, as with all the workshops, was facilitated first using a power point presentation. This presentation also gave examples of RPs but, compared to W1, they were delivered without comment on their weakness but rather areas of richness and strength were pointed out. In W2 the facilitator used the word, “*scruffy*” to single out one picture and proceeded to give advice to the groups, “*identify systems in the situation*” and “*resist decision making*”. In W2 the facilitator asked for volunteers to split into two groups of three with one person who as the client, another as the interviewer and the third person as the illustrator. The client was to think of a problem situation in their own lives. In all the workshops observed, the facilitators rarely got involved or gave comment during the picturing process. Questions were however answered when asked of the facilitators. W1 showed interest in icons and

metaphors along with pointing out humour and ambiguity in the pictures they showed prior to drawing. The facilitator in W2 did not show any interest in the icons. It was clear that the picture was a way of aiding discussion and debate and bringing a level of clarity to a situation. The facilitator stated, *"the pictures are not important, I don't even try, nowadays, to understand them"*.

W3 was a lecture on SSM with the RP being used as an activity for students to attempt. W3 had 2 groups of 3rd year undergraduate degree IS students. The lecturer, whose background is in computer science, did not show a great deal of energy or encouragement with the activity saying, *"it will be in your exams so we had better have a go"*. Thus said, the group work was started in a lack lustre way with only a few of the more diligent students partaking in the picturing exercise. The two groups in W3, after 5 minutes, seemed to enjoy the exercise and got really involved in their pictures. The lecturer stopped the groups drawing after 15 minutes as that was the end of the lecture. The groups carried on for a few minutes and then swapped their pictures between groups. The room was noisy and there was considerable laughter from both groups. In W3 the lecturer offered each group a full pack of 10 coloured pencils whilst in both the other workshops the facilitators offered no more than 4 or 5 large marker pens.

W1 and W3 both encouraged groups to draw and 'have a go', whereas W2, although encouraging volunteers to draw, stated, *"sometimes I find it is easier and less problematic if I draw the picture whilst the group discusses"*. A noticeable distinction between all 3 workshops is the time given to draw W1 offered 45minutes, W2 offered 35 and W3 gave only 15 minutes. W1 and W3 gave a '5 minutes left to draw' signal whilst W2 came to an abrupt end saying, *"Right, put down your pens please"*.

W1 and W3 acknowledged participants' uneasiness at being asked to draw by offering advice such as, "a common place to start is to draw yourself" *"sometimes starting in the middle can help"* and *"it's not about being a good drawer"*. What is a common and very verbal theme amongst all the groups in the workshops were the cries of, *"I can't draw"* and it was noted that participants were, at least at first, very uncomfortable drawing pictures. In W3 the students were interested to look, and not discouraged by the lecturer, at the other group's picture as they were all drawing the same scenario i.e., 'The complexities of University life'. In W2 this was actively discouraged by the facilitator, *"never compare the pictures"*. The resultant pictures in W2 and W3 were surprisingly detailed given the time allowed.

Table 4, using the 'Cycle of Communication' Model (figure 1), shows a critical comparison of the three workshops showing influencing factors of facilitation during different phases of the workshop. It should be noted that the three workshops concerned did not deviate from the linear stepped progression of the phases in the model (figure 1). Differences can be seen in Phase 1 of the model in the way the facilitator introduces the group to the RP and their drawing expectations whilst no differences can be seen within phases 2 to 4.

| Cycle of Communication Model | Workshop 1 | Workshop 2 | Workshop 3 | Difference noted (Yes/No) |
|---|--------------------------------|--------------------------------|--------------------------------|---------------------------|
| Phase 1: facilitator instruction | | | | |
| Technology used: | Laptop and presentation slides | Laptop and presentation slides | Laptop and presentation slides | No |
| Facilitator style | Relaxed and engaging | Authoritative | Disinterested | Yes |
| Example RPs shown to group | Yes | Yes | Yes | No |
| Gender and total of facilitator(s) | 2 male | 1 male | 1 female | Yes |
| Facilitator discusses weak elements of RPs | Yes | No | No | Yes |
| Facilitator discusses Positive elements of RPs | Yes | Yes | Yes | No |
| Facilitator suggests a starting place for drawing | Yes | No | Yes | Yes |
| Facilitator asks for group questions | Yes | Yes | Yes | No |
| Time offered for drawing | 45 minutes | 35 minutes | 15 minutes | Yes |
| Indication given of time remaining | Yes | No | Yes | Yes |
| Pens, colours and paper | 5 colours, flip chart paper | 3 colours, flip chart paper | 10 colours, A5 paper | Yes |
| Phase 2 Facilitators involved whilst group discusses | No | No | No | No |
| Phase 3 Facilitators involved whilst group construct picture | No | No | No | No |
| Phase 4 Facilitation whilst Groups discuss picture | Yes | Yes | Yes | No |

Table 4 Influencing factors on the facilitated workshops

Summary

This paper has identified three workshops involving RPs and compared materials and facilitation styles. It is fully recognised that these workshops are not indicative of all facilitation practices and this small exploratory study does not claim to be empirical. What is interesting is that even within a small study of three workshops there are notable differences in style, delivery, time allocated and materials offered. This concurs with conclusions of many of the authors in RP literature (Bronte-Stewart, 1999), with acknowledgement being made of the ad-hoc or unstructured approach that practitioners take to working with the tool.

It is accepted in literature (Berg & Pooley, 2012a) (Bronte-Stewart, 1999); (Bell & Morse, 2012b) that a conventional RP is not to be structured in terms of rules and enforcement of syntax. This literature (Ibid) agrees that there is no 'correct' way to organise the picture in terms of arrangement or construction. This is a deliberate aspect of the ethos of using visuals to convey meaning in a RP. As such, groups decide upon some interesting and often creative solutions for what to include and how to configure and organize the picture to determine what suits them aesthetically. Another consideration when accessing a RP is text. According to literature (Ibid) there is a consensus of opinion that text should be kept to a minimum. There is however, no advice on what constitutes 'a minimum' amount of text. Dan Roam, although not writing directly about RPs, attests to this theory, *"Whoever said a picture is worth a thousand words has forever warped our understanding of pictures. The goal of a picture isn't to eliminate a thousand words; it's to replace those that are better represented pictorially, so that the words we do use are the ones that trigger real insight"* (Roam, 2009).

This research has looked at different styles of facilitation and pointed out some of the various methods of instigating RP group work. There is little evidence to suggest that experienced practitioners need, or even require, a best practice structure for their facilitation of the RP. Their experience and knowledge allows them to adopt an approach which best serves their need and the needs of the client. There does however, seem to be a lack of knowledge inhibited by a dearth of literature by those who are inexperienced in using the RP tool. There is no strong evidence to prove that practitioners are put off from using the tool because of the lack of structure or direction but this research suggests it is a possible likelihood. There does seem to be a case for some best-practice guidelines for those who have not worked with the RP tool as a means to encourage and accelerate confidence. It can be suggested that the way in which a practitioner approaches their RP facilitation will impact upon the participants and the way they draw their picture.

It should be noted however, that style and instruction is a vast and very personal subject amongst facilitators. Experienced facilitators have, and do successfully run, their own personal styles but perhaps there could be a useful sharing and 'meeting of minds' for these such professionals to collaborate and offer advice to inexperienced academics and facilitators. Such advice might encourage more to use the RP tool and teach new students of its potential benefits. It is hoped that this research paper might act as a catalyst for debate concerning the role of the facilitator.

Bibliography

- Armson, R. (2011). *Growing Wings on the Way*. Axminster: Triarchy Press.
- Bell, S., & Morse, S. (2010). Rich pictures: a means to explore the 'Sustainable Group Mind'. *Sustainable Development*.
- Bell, S., & Morse, S. (2012a). *Resilient Participation: Saving the human planet*. Abingdon: Routledge.
- Bell, S., & Morse, S. (2012b). How People Use Rich Pictures to Help Them Think. *Systemic Practice and Action Research* .26,4,331-348.
- Bell, S., & Morse, S. (2013, Jan). Towards an understanding of how policy making groups use indicators. *Ecological indicators* .
- Berg, T., & Pooley, R. (2012a). Contemporary Iconography for Rich Picture Construction. *Systems Research and Behavioural Science* .
- Berg, T., & Pooley, R. (2012b). Rich Pictures: Collaborative Communication through Icons. *Systemic Practice and Action Research* .26,4, 361-378
- Berg, T., & Pooley, R. (2012c). Rich Pictures: A valuable means to explore complex IS issues. *17 international UK academy of Information Systems*. London: AIS Online library.
- Bronte-Stewart, M. (1999). Regarding Rich Pictures as Tools for Communication in Information Systems Development. *Computing and Information systems* , 6, 83-103.
- Cameron, E. (2005). *Facilitation made easy: practical tips to improve meetings and workshops*. London: Kogan Page.
- Cao, R., Chuah, K., Chau, Y., & Law, M. (2012). The role of facilitators in project action learning implementation. *The Learning Organisation* , 414-427.
- Checkland, (1981). *Systems Thinking, Systems Practice*. Chichester: Wiley.
- Conradin, K; Kropac, M; Spuhler, D. (2010). *The SSWM Toolbox*. Basel: seecon international gmbh. URL: . Retrieved Dec 17, 2012, from Sustainable Sanitation and Water Management toolbox: <http://www.sswm.info/category/planning-process-tools/exploring/exploring-tools/preliminary-assessment-current-status/rich>
- Gray, D., Brown, S., & Macanufo, J. (2010). *Gamestorming*. CA: O'Reilly Media Inc.
- Heron, J. (1999). *Complete Facilitator's Handbook*. London: Kogan Page.
- Isaacs, W. (1999). *Dialogue and the Art of Thinking Together*. New York: Doubleday Garden City.
- Monk, & Howard. (1998). *The Rich Picture: A tool for reasoning about work content*. Retrieved 05 23, 2013, from <http://www.ics.uci.edu/~wscacchi/Software-Process/Readings/RichPicture.pdf>
- Open-University. (2009). *Systems Thinking and Practise*. Retrieved 11 30, 2013, from T552: <http://systems.open.ac.uk/materials/T552/>
- Roam, D. (2009). *The back of the Napkin*. London: Marshall Cavendish Ltd.
- Sandker, M., Campbell, B., Perez, M., Sayer, J., Cowling, R., Kassa, H., et al. (2010). The role of Participatory Modeling in landscape approaches to Reconcile Conservation and Development. *Ecology and Society* , 15 (2).
- Scholz, G., Dewulf, A., & Pahl-Wostl, C. (2013). An Analytical Framework of Social Learning facilitated by participatory methods. *Systems Practice and Action Research* , DOI 10.1007/s11213-013-9310-z.
- Senge, P. (1990). *The Fifth Discipline*. New York: Currency Doubleday.
- Tsai, W., Shaw, M., Fan, Y., Liu, J., & Lee, K. (2011). An empirical investigation of the impacts of internal/external facilitators on the project success of ERP : a structural equation model. *Decision Support Systems* , 50, 480-490.